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ABSTRACT

This longitudinal study examined the drop-out rates of two-year college students in Korea and explored which characteristics influence student attrition. In 1996, a pilot study was undertaken in 18 schools, with a cohort of 1,865 students. This study involved questionnaires and in-depth interviews with 18 students. In 1998 and 1999, for the final study, another survey was distributed to 1,662 students with the same questions. Results indicated that: (1) four individual independent variables had significant effects on dropout-grades, mother's job, parents' financial contribution, and plans to transfer to another college; (2) there was a greater tendency to drop out among female students, which appeared to be influenced by reduced parental financial aid; (3) male students' educational aspirations exceeded those of females; (4) male students' dropout may be categorized as "positive attrition"-while temporarily out of college, it is assumed that male students are preparing to enter a four-year college; this is not so for female dropouts; (5) academic integration into the institution was a significant influence for females but not for males; and (6) most students perceived two-year colleges to be located at the bottom of the academic hierarchy, which contributed to their feeling of being second-class students. (Contains 59 references.) (EMH)

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The influences of student and institutional characteristics on two-year college student attrition in Korea

Introduction

College attrition has been of little concern to researchers and policy makers in Korea. Students who did not fit into a particular institution, or who were released for academic or economic reasons, were simply replaced with the next year's new class. Koreans have a zeal for schooling, especially post-secondary, which represents a unique phenomenon of Korean society. (Oh 2000: 17, Sorensen 1994: 21). There is no longer a steady stream of entering students to take the place of those who drop out, however, so dropouts simply represent lost students and lost revenue.

The dropout problem is growing worse in two-year colleges and in many suburban non-metropolitan colleges. And male students are more likely to drop out than female. In 1997, 26.4% of students in four-year colleges in Korea dropped out; in 1998, 27.8%, in 1999, 30.5%, in 2000, 30.5% and in 2001 30.7%. In 1997, 29.5% of students in two-year colleges in Korea dropped out; in 1998, 30.1%, in 1999, 33.1%, in 2000, 34.3%, and in 2001, 35.7%. The student dropout rate in four-year colleges in 2001 was 30.7%; that of two-year colleges was 35.7%. After the 1997 economic downturn in Korea, the college dropout rate has increased rapidly. The rate of male student dropouts in two-year colleges in 2001 was 92.7%; that of females was 7.3%.¹ The student dropout rate in four-year colleges in the metropolitan area in 2001 was 29.2%; that of non-metropolitan colleges was 32.1% (Korea

Ministry of Education 1997, 1998a, 1999, 2000, 2001).

Regardless of the reasons for dropping out, college student attrition leads to problems for students and institutions alike. Dropping out of school is considered a bad student outcome because students who drop out suffer a host of negative consequences, ranging from high unemployment and low earnings to low socio-economic status (Freeman 1976). Of all the two-year colleges in Korea, 97% are private. Nevertheless, in 1995 Korea Ministry of Education (MOE) financial support to these colleges was only 1.6%. Out of total funding for two-year private colleges, student tuition fees contributed 69.0% (Korea Ministry of Education 1998b). So if these colleges cannot retain their students, their survival is threatened.

Although the dropout problem is growing worse, our knowledge of the attrition process is surprisingly limited. Shortcomings in research include ambiguous definition of dropouts, lack of representative samples of institutions for making estimates that could be generalized to the whole college population in Korea, lack of a theoretical model of the dropout process, and lack of difference in gender, college type, school location. Most college-dropout research studies have not blamed institutional characteristics, but student shortcomings. Like academic achievement, however, school dropout rates are influenced by both individual and school characteristics. This study suggests that schools are at least partly responsible for student dropouts and thus that analyzing the dropout process can provide useful information for school improvement.

The dropout problem was derived from the broad social outcomes of economic and

educational policy. The main outcomes for two-year college student attrition can be described as falling within four levels. One set of outcomes is what happens in the national economy. A second focuses on trends in the student population. The third and the fourth look at the broad social outcomes of education policy.

First, the national economic downturn impacts on college student attrition. Within this problem several more specific kinds of levels can be distinguished. The economic downturn made the domestic economy worse than before, and two-year colleges in Korea are more likely to enroll economically less well off students (Han 1991). Moreover, most students at colleges and universities in Korea depend on parents for their tuition. Students who cannot afford the cost of college involuntarily depart from school; with the economic downturn, college financial aid to student was also reduced. Those students from low SES who need financial aid are more likely to drop out than those from higher SES; the economic downturn depressed the labor market. The continuing economic slowdown increased unemployment rates for post-secondary graduates, and approximately three hundred thousand became unemployed. These events generated "unemployment phobia." It is argued this phobia caused one-third of all college student dropouts. In this sense, the national economic crisis is part of the reason for two-year college students to drop out.

Second, the decrease in numbers of high school graduates causes college enrolments to fall. Since 1980, the Korea Ministry of Education has implemented the expansion of higher education. Throughout the 1990s, two- and four-year college enrollments expanded dramatically. Colleges and universities could survive by increasing the numbers of students

enrolled (Korea Ministry of Education 1975, 1990, 1995, 2000). However, in 2003 high school graduates will exceed the college entrance quota (Korea Ministry of Education 1998b). Two-year colleges confront a predicament, the lack of students.

Third, the Korea Ministry of Education's college self-regulation policy on the entrance quota, and the lack of restructuring efforts for school improvement of two-year colleges in Korea, increased the student dropout problem. After the expansion of higher education took place, the government realized that a prosperous future society requires highly developed intellectuals to ensure a competitive edge against other advanced countries. The higher education system has fallen short of nurturing strong intellectuals who can lead technological development in response to the demands of the labor market. The MOE, therefore, made efforts to raise the quality of higher education through improving educational conditions and enhancing faculty members' qualifications.

Therefore, the government is carrying out university accreditation, so far through mainly quantitative expansion, to enhance the quality of college and university education, and to facilitate the accountability of higher education. The Ministry of Education delegated its authority to the Korean Council for University Education (KCUE) to carry out university accreditation, which consists of both comprehensive accreditation and department evaluation. Comprehensive accreditation refers to the evaluation of each university in terms of educational goals, curriculum, financial capacity, facilities and educational equipment, administration, and students. Academic program evaluation assesses the quality of each program by the standards of educational objectives, curriculum, students' services and the

quality of faculties, facilities, administration, and finance.

By implementing on-site evaluation procedures, and announcing the accreditation results, the MOE encourages healthy competition among colleges and universities. This competition is aimed at the improvement of the educational environment and the promotion of high-quality education. The higher the ratings of colleges and universities, the more financial support and students they acquire for further enhancement of their programs. By adjusting enrollment quotas, the MOE let the colleges and universities control their own student entrance quotas. According to the accreditation result, most of the higher-rated colleges and universities are in the metropolitan area around Seoul. As the higher-rated colleges and universities controlled their own student quotas, college student numbers in the metropolitan area increased.

A new phenomenon then surfaced in student affairs at colleges and universities. Many students from lower-rated colleges and universities flowed into the higher-ranking colleges and universities, especially in the metropolitan area. Most of the lower-rated two- and four-year colleges in the suburbs, therefore, are running out of students.

In recent years, a debate has arisen concerning the continued viability of private two-year colleges and their ability to compete with public two-year colleges, proprietary four-year colleges and universities. Many private two-year colleges revealed that they hadn't made efforts to reform and improve themselves. They face rising costs and declining enrollments. The student-affairs professionals at private two-year colleges fear that there would not be enough students to keep their institutions functioning. These colleges should,

therefore, consider enrollment management.

Fourth, the educational policy on colleges' transfer-opportunity expansion is to cause two-year college students to drop out. It may be assumed the transfer-opportunity policy influences the dropout rates of two-year college students who plan to earn a baccalaureate or higher degree. Two-year college students who want to earn a baccalaureate or higher degree were approximately 70%, and who want to transfer to another institution were 29.8% (Kim 1997). Recently as the four-year colleges' transfer opportunities have been expanded, it is reported that the numbers of two-year college graduates and students who transfer to those institutions, especially in metropolitan area, are increasing after graduation and even while at college.

Enrollment management is now the buzzword of student-affairs professionals, especially in Korea's lower-rated two-year and four-year colleges and universities. Formerly, enrollment problems were defined as the need to recruit the allocated number of students, with little concern for the after-effects. Enrollment problems now include both the sizes of the entering class and strategies to reduce the number of dropout students and to increase student retention.

Officials should consider student satisfaction in selecting an institution, and retention of students to graduation. The physical and emotional environment, quality of teaching, and faculty / student interaction are all parts of the equation for successful colleges and universities.

This study examined dropout rates of two-year college students in Korea and explored

which characteristics influence two-year college student attrition.

A fundamental research question was:

"What causes some two-year college students to drop out?"

Theoretical Framework

One way of distinguishing theories of student attrition from one another is by the emphasis they give to different individual and environmental forces in the shaping of student behavior. It is possible to categorize theories as falling into one of five types, each with its own particular focus and level of analysis. These can be described by the terms psychological, societal, economic, organizational, and interactional (Tinto 1992, 1993).

The first, psychological, is the category of theory that, as the name implies, emphasizes the role of individual psychological attributes in the dropout process. The second, third, and fourth are theories that emphasize in different ways the impact of environmental forces on student behavior. The last category, interactional, sees students' behavior as influenced both by individual attributes and by environmental forces, especially those within the immediate setting of the institution in which students find themselves (Tinto 1992, 1993).

Typically, psychological research has sought to distinguish stayers and leavers in terms of attributes of personality (Heilbrun 1965, Rose and Elton 1966): that is, retention and dropout are primarily the reflections of individual actions. More important, such models invariably see student dropout as reflecting some shortcoming and/or weakness in the

individual. In this view, leaving is assumed to be reflective of personal failure of the individual to measure up to the demands of college life. The difficulty with the psychological view of student leaving is that it is not truly explanatory.

Societal theories of departure have differed because their views of the underlying causes of social success have also differed. Conflict theorists have argued that higher education, in particular, is structured to serve the interests of the prevailing social and educational elite. In their view, the student dropout must be understood not as an isolated individual event but as part of a larger process of social stratification, which operates to preserve existing patterns of educational and social inequality. Student dropout must be seen in the light of how its patterned occurrence among different persons and institutions serves to reinforce social inequality. Thus, it is argued that individual social status, race, and gender are particularly important predictors of student success and that high rates of dropout in two-year colleges reflect the intentional desire of educational organizations to restrict educational and social opportunity to particular groups in society (Brint & Karabel 1989, Clark 1960, Karabel 1972, Pincus 1980).

The structural-functional theorists see the outcome of schooling as reflecting the largely meritocratic contest among individuals for social attainment. In their view, patterns of student dropout tend to mirror differences in individual skills and abilities rather than social status *per se* (Astin 1991a, Astin 1991b, Featherman and Hauser 1976, Sewell and Hauser 1975, Tinto 1987).

Economic theories of student departure emphasize the importance of individual

finances and financial aid in student retention. Retention and dropout reflect economic forces. Individual decisions about persistence are not different in substance from any other economic decision that weighs the cost and benefits of alternative ways of investing one's scarce economic resources (Jensen 1981, Manski and Wise 1983, Tinto 1992, 1993).

Organizational theories of student departure, such as Kamens (1971) and Bean (1983), see the occurrence of student departure as reflecting the impact that the organization has on the socialization and satisfaction of students. Bean's study (1983) looked at the impact of organizational attributes (e.g., routinization, participation, and communication) and rewards (e.g., grades, practical value, and development) on retention through their impact on student satisfaction. The strength of the organizational view of student departure lies in its reminding us that the organization of educational institutions--their formal structures, resources, and patterns of association--does affect student retention. In explaining student departure, however, organizational theories do not enable us to understand how organizational attributes eventually impact on student decisions to stay or leave and why it is that different types of students may take on different types of leaving behavior within the institution. In this regard, these theories implicitly assume that all leavings arise from the same sources.

Interactional theories of student departure, those that have now come to dominate current views of student leaving, take student behavior as reflecting both individual and organizational attributes. The two cannot be separated and are intimately intertwined in the manner in which each comes to shape the interpretations that differing individuals give to their experiences. Tinto (1975) suggested a more complex form of the interactional view of

departure. Tinto's model argues that student decisions to leave are seen as directly and indirectly influenced by the individual's social and intellectual experiences in the various communities that make up the world of the college. It asserts that the match between individual characteristics and those of the institution shapes two underlying individual commitments: a commitment to completing college (goal commitment) and a commitment to his or her respective institution (institutional commitment). Accordingly, the stronger the goal of college completion and / or the level of institutional commitment, the greater the probability of persistence (Cabrera Castaneda, Nora, and Hengstler 1993, Cabrera, Nora, and Castaneda 1993).

The interactional model is the only theory of student departure to have generated a systematic testing of its ability to explain student departure from institutions of higher education (Pascarella and Terenzini 1979, Munro 1981, Pascarella and Chapman 1983, Pascarella and Terenzini 1983, Pascarella and Wolfle 1985). For that reason, this study carefully defined the categories of dropout and was guided by the interactional theories of departure, particularly Tinto's.

Of equal importance, this distinction between psychological, societal, economic, organizational, and interactional enables us to consider ways in which these disparate perspectives may be fused by highlighting the different level of analysis (individual, organizational, and societal) that can be applied to the study of student leaving (Tinto 1993).

Research on College Student Attrition

College student attrition research has identified two types of factors that account for differences in student departure: (1) individual characteristics, and (2) institutional characteristics.

Research has demonstrated that a variety of individual characteristics are related to students' attrition (Alba and Lavin 1981, Cabrera Castaneda, Nora, and Hengstler 1993, Cabrera, Nora, and Castaneda 1993, Cohen, Brawer, and Bensimon 1985, Rumberger 1981, Whitaker and Pascarella 1994). They include gender, ethnicity, socioeconomic status (SES), high school grades and college GPAs, and educational aspiration. Dropouts are disproportionately male, minorities, burdened with low grades and behavior problems, from low-income families with low educational attainment, and given little educational encouragement; academically they are less well prepared than their more successful classmates. The factors most closely associated with persistence in college are high school grades, family income, and parents' education. Theories of school dropout have indicated that both dropout and transfer behavior are related forms of voluntary departure from school (Cohen, Brawer, and Bensimon 1985, Grubb 1991, Kim 1997, 1998, 2000, Lee and Frank 1990, Velez 1985, Velez and Javalgi 1987). This study suggests that students' plans to transfer to four-year colleges are related partly to student attrition, and thus dropout rates can provide a useful measure of the two-year college's transfer function.

Institutional characteristics include three ranges of school characteristics: school

resources, structural characteristics of schools, and school process (Rumberger and Thomas, 2000).

There is consistent support for the idea that financial resources influence students' dropout rates. Cabrera Castaneda, Nora, and Hengstler(1993) found that both tangible and intangible components of financial aid were positively directly and indirectly related to student persistence.

Structural characteristics, such as school location (urban, suburban, rural) and type of control (public, private) also contribute to students' dropout rates. With respect to school location, this issue in Korea is to be most widely debated. A previous study (Kim 1998) found that dropout rates of two-year college first grade students in Korea are significantly higher in urban than in suburban schools.

Despite all the attention surrounding the previous factors, the controversy has focused on the school process: the climate institutions create for students' leaving. Based on Tinto's (1975, 1987) theoretical model of student attrition, it might be represented to academic and social integration. Students entering community colleges with higher levels of commitment to their institutions were found to be more socially and academically integrated at their respective institutions and, consequently, were more likely to persist.

Aim and Objectives

This study has one major aim and several detailed objectives.

The aim is to gain an understanding of the dropout process among Korean two-year college students with various characteristics.

Achieving this aim involved:

- Finding out what individual characteristics influence dropout plans among two-year college students, by gender and grade;
- Finding out what institutional characteristics influence dropout plans among two-year college students, by gender and grade;
- Investigating what happened to enrollment plans and dropout plans among two-year college students after the national economic crisis in Korea;
- Assessing the significance of the dropout rate to two-year college student progress and life in Korea;
- Suggesting how the characteristics of two-year colleges in Korea may actually promote dropout plans among students, and how those colleges might change their ways of working to enhance student retention rates.

In order to pursue this aim and these objectives, I designed a study in which I investigated the individual characteristics of two-year college students and institutional characteristics of two-year colleges through the use of questionnaires over two years.

Research Questions

This study was designed to draw on:

- knowledge of influencing variables on two-year college student attrition
- knowledge of the educational context of two-year college student attrition
- knowledge of dropout strategies of two-year college students

A fundamental research question was: "What causes some two-year college students to drop out?"

Research aims and objectives can be expressed by the following questions:

In empirically testable terms:

- 1) Do individual characteristics influence dropout plans among two-year college students in Korea?
- 2) Do institutional two-year college characteristics influence dropout plans among two-year college students in Korea?
- 3) Is the influence of individual characteristics and institutional characteristics on dropout plans significantly different by sex and grade?
- 4) Have the influences of individual and institutional characteristics on dropout plans significantly changed over time, especially after 1997, the turning point of the national economic crisis in Korea?

Research Methods

Data sources and Samples

The population for this study includes two-year college students in Korea. This study is the longitudinal design employed in cohort survey research. Data were collected from 1996 to 1999 in order to explore time-ordered associations.

In 1996, the pilot study was undertaken. It involved working in eighteen schools with a cohort of 1,865 students. The work involved questionnaires and in-depth interviews of 18 students. The pilot study enabled me to develop consistent approaches and procedures for working with students with dropout plans. In the pilot study, I was concerned with a dropout only as one who was not enrolled in college at some time during the previous year. This procedure for collecting the multilevel background information about student, schools, and school location was also refined during this pilot trial. As a result of the pilot study, I adjusted the measures to include several more challenging items. And I expanded the target student as one who does not plan to enroll at the beginning of the oncoming school semester, and does not plan to return to school.

In conducting the questionnaire in 1998 and 1999, I used the same questions and format. This data can provide insights into the college student dropout trend.

Longitudinal research rarely has been performed in studies of two-year college students in Korea; there's no national database about them that individual researchers may use. It

seems, therefore, that the important explanatory variables -- for instance, time, gender, school location, and grade -- have not been considered in understanding two-year college students.

Data were gathered in two phases. In phase one, two-year college students in Korea would be involved in the collection of quantitative questionnaire data. Two-year colleges were sampled via two-stage stratification, taking into account the geographical location and number of students in that area. The ranges of geographical locations were established as suburban, urban, and the capital, Seoul. According to proportional allocation, 1~3% of the two-year college student populations in each location were sampled.

The questionnaires were administered as follows:

Two-year college students' dropout plans were measured over two years from 1998 to 1999.

Table 1. The sample

<i>Time</i>	<i>Gender</i>		<i>Grade</i>		<i>Location</i>			<i>Total</i>	<i>School</i>
	Female	Male	1 st	2 nd	Sub-urban	urban	Seoul		
1998.5	838	466	725	580	745	414	146	1,305	9
1998.10	438	305	743		379	229	135	743	9
1999.5	1023	639	862	800	231	967	464	1,662	8

Conceptual Framework and Variables

This study pertains on one hand to the dispositions of individual characteristics who enter higher education and, on the other, to the character of their interactional experiences within the institution following entry.

At the individual level, the socio-economic background, ability, motivation, aspiration, and transfer plan proved to be centrally related to dropout from institutions of higher education (Brint and Karabel 1989, Karabel 1972, Pincus 1980, Tinto 1975, 1987).

At the institutional level, I set the four forms of individual experience that affect dropout rates -- recognition of the quality of educational environment, academic integration into the institution, social integration into the institution, and interaction with professors. Each is an important interactional outcome arising from individual experiences within the institution (Tinto 1975, 1987, 1992, Terenzini and Pascarella 1978, Munro 1981, Pascarella and Champman 1983, Pascarella, Terenzini, and Wolfle 1986, Pascarella and Terenzini 1991).

In order to examine the impact of intake factors on student attrition, a variety of individual characteristic data were obtained from student questionnaire. In addition to information about individual students, some measures were also used to estimate the student perception of school-level characteristics on dropout.

It has been very difficult to get clear dropout data and analysis from two-year colleges in Korea, because they have not grasped the issue. This problem is attributed in

part to a reluctance of some administrators and faculty to address the dropout phenomenon. Whatever the reason, data on students who drop out before completing a degree are hard to come by. More importantly, simple dropout rates do not explain the extent or the seriousness of attrition at the two-year colleges.

Therefore I collected data on dropout students through a questionnaire asking whether they have dropout experience or dropout plans and a depth interview.

In an attempt to clarify two-year college attrition, applying to Sheldon's category (1982), I identified three categories of attrition. The first category, "positive attrition," included students who dropped out or would like to withdraw in order to meet their objective -- to transfer to another institution, especially a four-year college or university. This "positive attrition" accounted for approximately 14 percent of the first grade dropout students in two-year colleges. The second category, "neutral attrition" included students who left because of a job conflict or because of joining the armed service.² These reasons, which imply neither success nor failure, accounted for approximately 59 percent of the attrition. In this research, dropouts who left to join the armed service, accounting for approximately 58 percent of the attrition, are excluded. The third category, "negative attrition" included students who were unprepared for class work, who were not motivated to complete their degree, who did not match their aptitude with their major, or who cannot afford the cost of college. "Negative attrition" accounted for approximately 23 percent of the attrition (Kim 1998, 2001).

The study focused on three measures of students' dropout.

Dropouts are individuals who

1. Were not enrolled in college at some time during the previous year
2. Have no plans to enroll at the beginning of the oncoming school semester,
and temporarily stay away from school.
3. Have a plan to leave college voluntarily and never return.

Model

Detailed descriptions of all variables used in this study are as follows:

Dependent variable

I used two outcome measures of dropout: whether two-year college students had ever dropped out before, plan to drop out in the future; and whether students planned to leave college voluntarily and never return. The first, *dropout experience and plan*, was coded 1 if the student had ever dropped before or planned to drop out in the coming semester; and 0 if he / she had not. The second, voluntary withdrawal, was also coded 1 if the student planned to leave college voluntarily in the future and 0 if he / she had not.

Independent variables

Individual Student -Level Variables

Within this level several more specific types of characteristics can be distinguished. The first type is students' demographic characteristic, gender. The second type is family

background characteristics, which were measured by two variables: SES, parental education, income, and occupational status; and the extent of parental financial aid. The third type is socio-psychological background characteristics, which were measured by six variables: high school academic performance GPA as the most common outcome measure for schooling; whether the student plans to transfer to another institution now and after graduating college; educational aspiration; occupational aspiration; parental educational expectation as significant others' encouragement; prior perception of labor market for two-year college graduates.

Institutional Level Variables

School-level characteristics used in the study are two types. The first is the structural characteristic of schools: whether the college is geographically located in metropolitan Seoul, in an urban area, or in a suburban area. The second is school resource characteristics, which were measured by three variables: students' assessments of the quality of their colleges, especially educational environments; the climate institutions create which were measured by students' academic and social integration into institution based on Tinto's (1975, 1987) theoretical model of student attrition. Academic integration into institution is the development of a strong affiliation with the college academic environment, both in the classroom and outside class. It includes interactions with faculty, academic staff, and peers (e.g., study groups, formal contact with faculty) (Tinto 1993). Social integration into institution is the development of a strong affiliation with the college social environment both

in the classroom and outside of class. It includes interactions with faculty, academic staff, and peers (e.g., peer group interactions, informal contact with faculty, involvement in organizations) (Tinto 1993).

Method

Given the dichotomous dependent variables, logistic regression models were used to estimate the multivariate equations. Logistic regression coefficients represent the effect of a unit change in the independent variable on the log of the odds of being in the dependent variable.

The analyses began with an examination of the variables that significantly affect dropout of two-year college students. Another analysis the independent variable affect dropout is to examine the dropout models separately for male and female students, the first grade and the second grade. This subgroup analysis offered insights into how the dropout process differs for the gender and grade. The model chi-square that tests the fit of the model against a null model is also represented.

Results

Descriptive information

Frequency about the dependent variable, dropout is shown in Table 2.

Table 2. Frequency of dropout and enrollment

	<i>Number</i>	<i>Percent</i>
Enrollment plan	2887	77.8
Dropout plan	501	13.5
Sub-total	3388	91.3
Missing	322	8.7
Total	3710	100.0

Dropouts by year, gender, grade is shown in Table 3.

Table 3. Dropouts by year, gender, grade

		<i>1998.5</i>		<i>1998.10</i>		<i>1999.5</i>	
		Female	Male	Female	Male	Female	Male
<i>Drop- Out</i>	1grade	59 (7.7)	27 (9.9)	63 (14.7)	49 (16.7)	112 (11.1)	77 (12.4)
	2grade	13 (1.7)	14 (5.1)			40 (4.0)	47 (7.5)
	Total	72 (9.4)	41 (15.0)	63 (14.7)	49 (16.7)	152 (15.1)	124 (19.9)
<i>enroll ment</i>	1grade	328 (42.9)	103 (37.7)	365 (85.3)	244 (83.3)	430 (42.7)	220 (35.3)
	2grade	365 (47.7)	129 (47.3)			424 (42.1)	279 (44.8)
	Total	693 (90.6)	232 (85.0)	365 (85.3)	244 (83.3)	854 (84.9)	499 (80.1)

Table 3 indicates that in May 1998, 12.2 percent of two-year college students had a dropout plan, and in May 1999, 17.5 percent. Thus 5.3 percent points of students rate who have dropout plan were increased. This also shows how outcomes vary by gender and grade. In two cases May 1998 and May 1999, the group differences are significant. Both male and female student dropouts were increased, but men were more likely to drop. The grade contrast shown in Table 2 suggests that grade is one of the largest sources of

dropout. Over twice as many the first grade students as the second grade students planed to dropout (in May 1998, 8.8 percent versus 3.4 percent; in May 1999, 11.75 percent versus 5.75 percent).

Descriptive information on the dropout, individual and institutional characteristics of the respondents are shown in Table 4.

Table 4. Descriptive Statistics

<i>Variable</i>	<i>Mean</i>	<i>Std. Deviation</i>
Dropout plan	.15	.355
Time	2.17	.870
Grade	1.39	.487
Student (N=3710)		
Sex	1.38	.477
Father's education	2.84	1.199
Mother's education	2.33	.988
Father's job	3.00	1.127
Mother's job	1.70	.936
Income	166.51	134.492
Parent's financial aid	6.01	1.781
High school grade	2.71	1.530
Educational aspiration	2.08	1.007
Parent's educational expectation	1.89	.901
Transfer plan	1.69	.458
Perception on labor market	13.24	3.549
College		
Location	1.84	.731
Quality of educational environment	39.16	7.385
Academic integration	16.48	3.846
Social integration	8.68	2.367

On reliability of items in questionnaire, indicating that I investigated institutional characteristics, I obtained Cronbach α coefficients of .87 for the recognition of the quality of educational environment , .74 for the academic integration into institution, .60 for the social integration into institution.

Predictors of Dropout

I was interested in the general process leading to dropping out. Table 5 reports logistic regression coefficients for model. Time, grade, mother's job, the parents' financial aid, transfer plan to another college, quality of educational environment, and academic integration - 8 variables are significant in Table 5. Among these, grade, the parents' financial aid, transfer plan to another college, quality of educational environment, and academic integration have negative effects on dropout. The first grade, the students with mothers with high status job, parents' less financial aid, less transfer plan to another college in individual characteristics, dissatisfaction with the quality of educational environment, and less academic integration in institutional characteristics are *more* likely than others to drop out two-year colleges.

The Effect of Individual Characteristics

Tests of significance showed that only 4 of the individual independent variables have significantly effects in the equations; grade, mother's job, the parents' financial aid and transfer plan to another college.

Table 5 shows that gender had no effect on dropout. Although the result in Table 5 shows that gender doesn't has a significant effect on dropout, I present separate equations

to show how the process of dropout varies for male and female (Table 6). The results in Table 6 suggest that the process leading to dropout varies between the two groups. Time and grade are significant in both equations. The great dropout rate among women observed in Table 6 was due to the parents' financial aid in individual characteristics. This variable was significant for females but not for males, whereas mother's job and the transfer plan to another institution were significant for males but not for females. The greater tendency of female students to drop appeared to result from reduced parental financial aid. The more male students tended to drop, the higher the status of their mother's job and the more they plan to transfer to another institution. Both female and male students are more likely to drop, and on the effect of grade, in first grade than second grade.

It is interesting that more direct resources, such as parents' financial support, affect the dropout for female students than is the case for male students. For male students, the plan on their future way, such as the transfer plan to another institution, especially four-year colleges, and mother's job affects the dropout.

On the effect of grade, the first grade students' dropout than that of the second grade is more likely to be affected by various variables in individual characteristics. Time, parents' financial aid, transfer plan, perception of the labor market among the individual characteristics, quality of educational environment and the academic integration into institution among the institutional characteristics-6 variables affect the first grade students' dropout (Table 7). Both groups tend to drop out as time goes by. All effects, except time, are negative, which indicates that student more supported by parents in the aspect of tuition fees,

with less concrete plan to transfer to four-year colleges, and insensible to labor market among individual characteristics are less likely to drop than are not.

Tests of significance show that none of the independent variables have significant effects in the equations for the second grade students. That is, the effect of grade here is quite different for the two groups, the first and the second. Although the second grade students are not affected by the variables in the model, an examination of the size, significance, and direction of the coefficients in Table 7 suggests that the process leading to dropout is quite different for the two groups. The second grade students is more likely to drop when they have higher aspiration to attain the higher degrees.

The Effect of Institutional Characteristics

Table 5 presents the quality of educational environment and the academic integration into institution among the institutional characteristics had negative effects on dropout. The quality of the educational environment affects the students' college completion rates, and the effects of the academic institutional integration indicate that success in college depends in part on active involvement in academic aspects of the college environment.

Again, the model looks different for males and females. Only two variables, time and grade were significant in both equations. In institutional characteristics, the academic integration into institution were significant for females but not for males, whereas the extent of satisfaction with the quality of college educational environment were significant for males but not for females.

The higher observed college enrollment rates for women than men are explained by the variables in the model. Women may drop college for academic reasons, or they may place more emphasis than men on academic aspects of college life.

On the effect of grade, the first grade students' dropout is more likely than that of the second grade to be affected by two variables in institutional characteristics: the quality of educational environment and the academic integration into institution. The effects of academic integration into institution may indicate that students have weight on the school variables to modify or reaffirm their achievement goals. According to the result of this research, the reasons of the first grade students' dropout which they represented are concentrated on hope to transfer to four-year colleges (11.8%), major being not to their aptitudes (12.3%), and domestic downturn (6%). In the case of students who plan to dropout and never return excessively focus their dropout attention on the two formers: hope to transfer to four-year colleges (21.3%), major being not to their aptitudes (33.7%). For these kinds of dropouts, school environments in the academic aspect are likely to be used as a measure of dropout, thus the first grade students base their educational decisions on them.

The Effect of Time

Table 8 indicates that two-year college students' dropout plan is affected by gender, grade, and the quality of educational environment in May 1998; by grade, parents' financial aid, parents' educational expectation, transfer plan to another institution, academic integration into institution in May, 1999. Men were more likely to drop in 1998, but both

male and female student dropouts increased from 1998 to 1999,. As time passed, student dropouts are not reduced but rather increased in both male and female, and in the first grade. Students' dropout is more likely to be affected by financial support and socio-psychological background characteristics over time. It is assumed that this trend is probably related to the national and domestic slowdown.

Table 5. Logistic Regression Coefficients for Models Predicting Dropout

Independent variable	<i>Dropout</i>		
	B	SE	odds
Time	0.450***	0.098	21.073
Grade	-1.189***	0.174	46.536
Gender	0.149	0.153	0.946
Father's education	-0.113	0.088	1.656
Mother's education	0.023	0.104	0.048
Father's job	0.011	0.070	0.026
Mother's job	0.148*	0.073	4.130
Income	0.000	0.001	0.644
Parents' financial aid	-0.122**	0.041	8.686
High school grade	0.030	0.045	0.441
Educational aspiration	0.059	0.084	0.490
Parents' aspiration	0.139	0.087	2.532
Transfer plan	-0.550***	0.160	11.815
Labor market	-0.029	0.020	2.037
College location	-0.184	0.109	2.837
Educational environment	-0.023*	0.011	3.960
Academic integration	-0.078***	0.022	12.419
Social integration	-0.036	0.032	1.252
Constant	2.924***	0.796	13.478
-2 log likelihood	1295.891		
Model Chi-square	135.919***		
Overall Percent Collect	86.872		

p<.05 ** p<.01 *** p<.001

Table 6. Logistic Regression Coefficients for Models Predicting Dropout by Gender

Independent Variables	Female			Male		
	B	SE	odds	B	SE	odds
Time	0.532***	0.130	16.709	0.404*	0.158	6.501
Grade	-1.132***	0.226	25.008	-1.293***	0.283	20.910
Father's education	-0.087	0.118	0.541	-0.149	0.135	1.217
Mother's education	-0.038	0.141	0.071	0.093	0.155	0.356
Father's job	-0.003	0.094	0.001	-0.004	0.109	0.001
Mother's job	0.016	0.099	0.026	0.334**	0.116	8.331
Income	0.000	0.001	0.190	-0.001	0.001	2.619
Parent's financial aid	-0.150**	0.054	7.658	-0.085	0.068	1.551
High school GAP	0.039	0.065	0.354	-0.002	0.066	0.001
Educational aspiration	0.038	0.115	0.109	0.045	0.128	0.121
Parent's aspiration	0.056	0.119	0.220	0.264	0.136	3.791
Transfer Plan	-0.293	0.220	1.776	-0.827***	0.249	11.057
Labor market	-0.033	0.026	1.554	-0.026	0.033	0.613
College location	-0.150	0.139	1.172	-0.303	0.184	2.708
Educational environment	-0.014	0.015	0.860	-0.040*	0.019	4.358
Academic integration	-0.089**	0.031	8.453	-0.065	0.034	3.744
Social integration	-0.047	0.042	1.241	-0.005	0.050	0.010
Constant	2.871**	1.044	7.560	3.730**	1.213	9.461
-2 log likelihood	778.638			500.404		
Model Chi-square	74.877***			74.155***		
Overall Percent Collect	87.884			85.125		

* p<.05 ** p<.01 *** p<.001

Table 7. Logistic Regression Coefficients for Models Predicting Dropout by Grade

Independent Variables	1 st grade		2 nd grade	
	B	odds	B	odds
Time	0.472***	15.894	0.289	2.564
Gender	0.143	0.649	0.209	0.429
Father's education	-0.137	1.728	-0.087	0.248
Mother's education	0.011	0.008	0.078	0.160
Father's job	0.016	0.038	0.006	0.001
Mother's job	0.113	1.606	0.165	1.577
Income	-0.001	0.826	0.000	0.040
Parent's financial aid	-0.142**	8.661	-0.065	0.571
High school GAP	0.069	1.783	-0.117	1.265
Educational aspiration	0.044	0.200	0.070	0.165
Parent's aspiration	0.096	0.867	0.301	3.067
Transfer Plan	-0.602***	10.371	-0.460	2.001
Labor market	-0.051*	4.661	0.041	0.920
College location	-0.203	2.634	-0.072	0.094
Educational environment	-0.031*	5.361	-0.002	0.009
Academic integration	-0.093***	13.139	-0.047	1.000
Social integration	-0.025	0.487	-0.062	0.823
Constant	2.873**	9.881	-2.119	2.255
-2 log likelihood	926.382		355.178	
Model Chi-square	82.884 ***		22.832	
Overall Percent Collect	83.182		93.076	

p<.05 ** p<.01 *** p<.001

Table 8. Logistic Regression Coefficients for Models Predicting Dropout by Time

Independent Variables	May, 1998			May, 1999		
	B	SD	Odds	B	SD	odds
Father's education	-0.118	0.152	0.595	-0.063	0.134	0.222
Mother's education	0.122	0.177	0.478	0.052	0.153	0.117
Father's job	0.014	0.130	0.011	0.014	0.106	0.017
Mother's education	0.130	0.126	1.060	0.111	0.104	1.145
Income	0.000	0.001	0.004	0.000	0.001	0.136
Parent's financial aid	-0.094	0.067	1.940	-0.152*	0.069	4.858
High school GAP	-0.066	0.084	0.619	0.062	0.070	0.773
Educational aspiration	0.234	0.140	2.784	-0.084	0.133	0.395
Parent's aspiration	0.006	0.156	0.002	0.330*	0.132	6.276
Transfer Plan	-0.231	0.286	0.649	-0.811 ***	0.240	11.388
Labor market	-0.044	0.033	1.840	-0.013	0.033	0.152
College location	-0.350	0.193	3.285	-0.155	0.182	0.727
Educational environment	-0.058**	0.020	8.105	0.015	0.017	0.831
Academic integration	-0.034	0.038	0.795	-0.130***	0.036	12.854
Social integration	0.021	0.054	0.148	-0.075	0.052	2.143
Grade	-1.462***	0.282	26.830	-1.113***	0.247	20.259
Gender	0.547*	0.276	3.919	-0.112	0.236	0.225
Constant	2.960*	1.411	4.398	4.218***	1.267	11.077
-2 log likelihood	462.731			540.670		
Model Chi-square	63.481***			68.761***		
Overall Percent Collect	90.347			83.960		

p<.05 ** p<.01 *** p<.001

Conclusion

Clark (1960), Kerckhoff (1976) and others have suggested that although all societies need to encourage their youths, they also have a tendency to replicate themselves in order to preserve the status quo. Educational systems in general and higher education in particular contribute to this replication process by using external criteria, such as gender and class, in

order to select out who will be successful and to cool out those who will not be successful (Hanson 1994). Two-year colleges have provided the students who try to move upward socially with the opportunity of higher education which may achieve it. Two-year colleges' trajectory, however, has also been shaped by the need to select and sort students destined to occupy different positions in the job structure of a capitalist economy (Karabel 1972, Brint and Karabel 1989, Pincus 1994, Velez 1985). In such a situation, Clark notes "for large numbers failure is inevitable and structured" (Clark 1960).

How many dropouts are there among two-year college students who showed high educational aspiration? According to the previous study (Kim 1997), two-year college students who plan to earn a baccalaureate or higher degree were approximately 70%, and who want to transfer to another institution were 29.8%. After graduating, the two-year college graduates who want to go to a higher-grade school come down to 7.1%; in 2001 only 6.7% of two-year college graduates transfer to four-year colleges and universities (Korea Ministry of Education 2001). This 'cooling out' process (Clark 1960) protects the meritocratic image of higher education. Is there a selection process working in the creation of dropouts? Yes.

Several conclusions may be drawn from this research. This study tested several questions about student and institutional characteristics' impact on student dropout in two-year colleges.

The first question is that which individual characteristics influence dropout plans among two-year college students, in particular by gender and grade in Korea. Analyzing the cohort

survey of two-year college students, tests of significance showed that only 4 of the individual independent variables have significant effects in the equations: grade, mother's job, the parents' financial aid, and transfer plan to another college.

It is assumed that females and males may experience the dropout at different periods, through a different process, and by different resources. Although both female and male students are more likely to drop, on the effect of grade, in first grade than second grade, predicting dropout of two groups is affected by the different resources.

The greater tendency of female students to drop appears to reflect reduced parental financial aid. The more male students tended to drop, the higher status of mother's job is and the more transfer plans to another institution they have.

It is interesting that more direct resources, such as parents' financial support affect the dropout for female students more than is the case for male students. For male students, the plan on future way, namely the transfer plan to another institution, especially four-year colleges is more important resource.

In this research, male students' educational aspirations exceed those of females and there is a greater consistency between the aspirations and transfer plan to four-year colleges of men than of women. Students who plan to transfer to another institution generally have higher rates of college dropout than students who don't plan to transfer. This finding is consistent with the previous research (Kim 1998, 2001). It seems that male dropouts are likely to plan to transfer to another college rather to attain a two-year college associate degree as a terminal one. The positive effects of transfer plan on dropout of male students

point to the importance of socio-psychological background characteristics and images of the future.

The evidence on the significance of students' dropout by gender suggests that women are more likely than are men to adjust their educational aspirations downward and their future plan over time (Randour, Strasburg and Lipman-Blumen 1982, Wilson and Boldizar 1990, Hanson 1994). My results suggest that those women showing high aspiration for a degree are more likely than men to be cooled out.

According to categories of student attrition, male students' dropout may be categorized as "positive attrition", whereas that of female students' may be categorized as "negative attrition". While temporarily staying away from college, it is assumed that male students are likely to prepare to re-enter another four-year college. Therefore, male students' higher odds of dropping out in Korea may result from a general cooling-out process that specifically affects men.

Mickelson (1989) argued that almost all students have positive abstract attitudes about education, but those who view inequitable opportunity structures in the labor market will have more negative concrete attitudes (Clark 1960, Rosenbaum 1975, Alexander, Cook, and Macdill 1978, Furlong 1986, Ayalon and Yuchtman-Yaar 1989, McClelland 1990, Hanson 1994). Actually, according to the result of this study, the first grade is likely to be sensible to the structure of labor market. The first grade students with negative perception of the labor market, which is unequal to two-year college graduates than four-year college graduates, tend to drop in Korea. And then they want to transfer to another college, especially a four-

year college.

The second hypothesis, that institutional two-year college characteristics influence dropout plans among two-year college students in Korea, is also supported. Much of the research on dropout argued that students blame themselves rather than the institution for the frustration of their ambitions (Abel 1984). According to the result of this study, however, the quality of educational environment affects the students' college completion, and the effects of the academic institutional integration indicate that success in college depends in part on active involvement in academic aspects of the college environment.

In institutional characteristics, the academic integration into institution was significant for females but not for males, whereas the extent of satisfaction with the quality of college educational environment were significant for males but not for females. Women may drop college for academic reasons, or they may place more emphasis than men on academic aspects of college life.

Most two-year college students in Korea choose their schools as 'second best' (Monk-Turner 1990), after they failed to go on to four-year colleges and universities because two-year colleges are located at the bottom of the academic hierarchy. The majority of students who enter two-year colleges in Korea expect to transfer to four-year institutions after obtaining associate degrees and even during their college days. Besides, the relatively low-status small budgets of two-year colleges often are reflected in their physical settings. These all reinforce students' self-perceptions that they are second-class.

Gaskell (1985) also showed how students' knowledge of school and work environments

is integrated into students' attitudes and choices that reproduce the class structure. Thus, the "choices" the students made reflected their knowledge of their school and of society and reproduced both class and gender categories.

The third conclusion is the influences of individual and institutional characteristics on dropout plans significantly changed over time, especially after 1997, the turning point of the national economic crisis in Korea. Right after the economic downturn in 1998, student dropout has increased in both males and females, and in the first grade. Students' dropout is more likely to be affected by financial support and socio-psychological background characteristics over time. As the national economic downturn is ongoing, two-year college students' dropout is affected by more various variables.

Two-year colleges teach some of their students to lower their aspirations and reconcile themselves to obtaining a two-year degree. Students also come to school with varying coping strategies to get through the levels of obstacles. Although gender and grade may work in the expected ways, it is males and the first grade students who are more likely to drop out. Thus gender, grade, and time statements about the role of variables in cooling-out process cannot be applied to all students.

The educational importance of this study includes:

Using a two-year survey, this research pays attention to the process by which individuals come to withdraw from two-year colleges. This would enrich educational outcomes which the social and economic context affects the individual educational activity.

This research is longitudinal and interactional in character. It emphasizes the

longitudinal process of interactions which arises among individuals within the institution and which can be seen over time to account for the process of dropout or disassociation. In this sense, it is not merely a descriptive model of dropout but an explanatory one.

This study redefines the individual and institutional meaning of college student dropout in Korea. The mislabeling of dropout serves to gloss over important differences among different forms of leaving. It challenges stereotyped preconceptions and misconceptions of dropout and helps college administrator judge to treat the student dropouts with varied reasons by institutional action.

As a result, this study will shed some light on the nature of the dropout process. This research will provide implications for current retention policy of two-year colleges and MOE in Korea. The issue of institutional and national choice will be clearest by this study. In coming to grips with the question of what should be done to retain students, two-year colleges must decide on the types of dropout behavior and types of student dropouts with whom they should be concerned. Because of the complex nature of dropout patterns, each college needs to determine the extent of its own attrition problem, examine attrition patterns, and develop appropriate retention plans.

The potential for private two-year colleges in Korea to survive into the 21st century depends on their ability to effectively market their strength, expand their enrollment bases, operate in a fiscally responsible manner, and maintain strong leadership and a committed faculty. Given these conditions, private two-year colleges will continue to play a valuable role in the Korean system of higher education.

¹ Enrollment and dropouts in two-year and four-year colleges

	unit: persons						
	Enrollment(A)	Dropouts(B)	B/A	Male Dropouts (C)	C/B	Female Dropouts (D)	D/B
4year colleges*	1,729,638	531,053	30.7	461,332	86.9	69,721	13.1
2year colleges	952,649	340,156	35.7	315,409	92.7	24,747	7.3

* except university of education, industrial college, the university of the air
Korea Ministry of Education. *Korea Ministry of Education Statistics* 2001.

² All men in Korea over the age of 18 are required to join the armed service, if they are not handicapped.

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